

Claims:

1. A tire for a vehicle, said tire including a pair of annular beads laterally spaced along an axis of rotation of said tire, a plurality of plies extending between said beads to define a carcass having a pair of radially extending sidewalls and a tread portion, an elastomeric cap covering
5 said carcass and extending across each of said sidewalls and said tread portion, said plies extending about said beads to provide an inwardly directed bead seat for sealing against a rim, said bead seat having a substantially frustoconical inwardly directed sealing surface inclined to said axis of rotation at an angle in the range of 10° to 12° and said carcass having a radial spacing between said sealing surface and a radially outer surface of said cap that is less than or equal to
10 60% of a maximum width of said carcass in a free body state
2. A tire according to claim 1 wherein said sealing surface is inclined at an angle of 11° .
3. A tire according to claim 1 wherein said cap terminates along said sidewalls radially
15 outwardly of said beads.
4. A tire according to claim 1 wherein a tread is formed on said cap.
5. A tire according to claim 2 wherein said radial spacing is less than or equal to one-half of
20 said maximum width.
6. A wheel rim for a vehicle, said rim having a circumferential well with a based and a pair of upstanding sidewalls, a pair of lateral extensions projecting from respective ones of said sidewalls to a pair of bead support surfaces, each of said bead support surfaces being
25 frustoconical with an included angle in the range of 20° to 24° , said bead support surfaces terminating at laterally outer edges in upstanding flanges directed to an opposite side of said lateral extensions to said well.
7. A wheel rim according to claim 6 wherein said flanges are part circular in section.

8. A wheel rim according to claim 6 wherein said bead support surfaces have an included angle of 22°.

5 9. A vehicle wheel assembly having a rim and a tire mounted on said rim, said rim having a centrally disposed well and a frustoconical bead support surface to either side thereof and having an included cone angle in the range of 10° to 12°, said bead support surfaces terminating in an upstanding flange overlapping a radially inner portion of said tire, said tire including a pair of annular beads, each associated with a respective one of said bead seats, a plurality of plies
10 extending between said beads to define a carcass having a pair of radially extending sidewalls and a tread portion, an elastomeric cap covering said carcass and extending across each of said sidewalls and said tread portion, said plies extending about said beads to provide an inwardly directed bead seat for engagement with said bead support surfaces, said bead seat having a substantially frustoconical inwardly directed sealing surface complementary to said bead support
15 surfaces, said carcass having a radial spacing between said sealing surface and a radially outer surface of said cap that is less than or equal to 60% of a maximum width of said carcass in a free body state.

20 10. A vehicle wheel assembly according to claim 9 wherein said bead support surfaces have an included angle of 22°.

11. A vehicle wheel assembly according to claim 9 wherein said flanges project laterally outwardly and said cap terminates adjacent to said flanges.

25 12. A vehicle wheel assembly according to claim 12 wherein said flanges are part circular in section.

13. A vehicle wheel assembly according to claim 12 wherein said flange extends radially from said support surfaces greater than 0.5 inches.